Defense Information Infrastructure (DII) Common Operating Environment (COE)

Software Version Description (SVD) for Joint Mapping Tool Kit (JMTK) Version 1.0.0.10P1

Document Version 1.0

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1.   Scope

1.1   Identification

This document is the JMTK 1.0.0.10 Patch 1 Software Version Description (SVD). The Joint Mapping Toolkit (JMTK) comprises the Mapping, Charting, Geodesy, and Imagery (MCG&I) functionality for the Defense Information Infrastructure Common Operating Environment (DII COE). The controlling Data Item Description (DID) for preparation of this document is DI-IPSC-81422 (Software Version Document).

This SVD documents Joint Mapping Tool Kit (JMTK) , Version 1.0.0.10P1.

JMTK is hosted on the following platforms:

- C   Hardware: Tactical Advanced Computer, version 3/4 (TAC-3/TAC-4)
  Operating System: HP-UX 10.20
  DII COE Kernel: 3.0.1.0 (with patches P1 and P2)

- C   Hardware: Sparc 10/20
  Operating System: Solaris 2.5.1
  DII COE Kernel: 3.0.0.3 (with patches P2, P3, and P4)

1.2   System Overview

1.2.1   Common Operating Environment Overview

The DII COE is intended for use by all United States Department of Defense (DoD) Command, Control, Communications, Computer, and Intelligence (C^4I) Systems and Automated Information Systems (as the infrastructure on which they reside). The COE is defined as an integrated architecture comprised of hardware and software that provides standard, modular, system and applications support software for a tailorable set of functional applications.

Goals of DII COE development are:

    Interoperability at all levels of C^4I operation,
- C   Reusability of software,
- C   Common, intuitive human-computer interface, and
- C   Code portability.

1.2.2   JMTK Program

JMTK is a program sponsored by the National Imagery and Mapping Agency (NIMA), formerly the Defense Mapping Agency (DMA), to integrate DoD software into a toolkit which will meet the MCG&I requirements of the Defense Information Systems Agency (DISA) and DII COE. The JMTK will provide standard mapping, charting, geodesy, and imagery data and exploitation capabilities as a functional area for the DII COE. JMTK will be implemented through an evolutionary migration process. The 1.0.0.10P1 delivery of the JMTK consists of an integration of the Navy's Chart product for visual capabilities, the Army's Terrain Evaluation Module for analysis functions, and the Air Force's Common Mapping Tool Kit for spatial database management services. In subsequent releases, the JMTK will migrate from a constrained approach dictated by its initial reliance on the service components' software contributions to an independent architecture that is objective and in compliance with the DII COE.
The Joint Mapping Toolkit Visualization Component is the DII COE child segment that provides the core mapping capabilities for the DII COE C4I system.

When distributed by the National Imagery and Mapping Agency (NIMA), Joint Mapping Tool Kit consists of three logically distinct integrated products:

- C   Joint Mapping Visual (JMV)
- C   Joint Mapping Analysis (JMA)
- C   Joint Mapping Spatial Database (JMS)

This software applies solely to the visualization component.

1.3   Product Information

Product Qualification
Test and evaluation (T&E) were performed at the INRI San Diego facility prior to delivery of the software.

Product Restrictions
INRI's intellectual property rights to deliverables defined in this document are covered by the copyright license under the clause in DFARS 252.227-7013 (Nov 1995).

Product Dependencies
This patch is dependent on a properly installed and configured Operating System, Kernel, and JMTK 1.0.0.10.

2. Referenced Documents

The following documents form a part of this specification to the extent specified herein. In the event of a conflict between the documents referenced herein and the contents of this specification, the contents of this specification will be considered the governing requirement

2.1   Government Documents

Defense Information Systems Agency. Defense Information Infrastructure (DII) Common Operating Environment (COE) Integration and Runtime Specification (I&RTS), Version 3.0. 1 January 1997.

2.2   Non-Government Documents

   a.   *Computer Sciences Corporation. DRAFT Software Requirements Specification for the Joint Mapping Tool Kit (JMTK) of the Defense Information Infrastructure   (DII) Common Operating Environment (COE). Release 1.0.* 9 October 1995.

   b.   *Version Description Document, Unified Build version 3.0.2.5,* INRI. 14 April 1997.

   c.   Chart API
            - Chart API 3.0.2 (DII COE SDE-API-CHART-3.0.2   9/30/96)
            - 3.0.2.5 update (See Section 3.1, Inventory of Materials Released)

3. Version Description

3.1 Inventory of materials released

Magnetic media:

The following unclassified tapes are included in the delivery.

- C JMTK Version 1.0.0.10P1 on a 4mm DAT cartridge, intended for TAC-3/TAC-4 hardware environment. This segment can be run on DII COE Kernel Version 3.0.1.0 (with patches P1 and P2) supporting HP-UX 10.20 Operating System.

- C JMTK Version 1.0.0.10P1 on an 8mm EXABYTE cartridge, intended for Sparc 10/20 hardware environment. This segment can be run on DII COE Kernel Version 3.0.0.3 (with patches P2, P3, and P4) supporting Solaris Operating System Version 2.5.1.

Documents:

For each document listed below, two laser originals and a disk containing a WordPerfect 6.x file accompany the delivery:

- C *Installation Procedures (IP) for Joint Mapping Tool Kit (JMTK) Version 1.0.0.10P1*, DII.10010P1.HP1020_SOL251.JMTK_IP_1.0, 26 August 1997.

- C *Software Version Description (SVD) for Joint Mapping Tool Kit (JMTK) Version 1.0.0.10P1*, DII.10010P1.HP1020_SOL251.JMTK_SVD_1.0, 26 August 1997.

- C *Software Test Report (STR) for Joint Mapping Tool Kit (JMTK) Version 1.0.0.10P1*, DII.10010P1.HP1020_SOL251.JMTK_STR_1.0, 26 August 1997.

3.2 Inventory of Software Contents

A listing of all computer libraries and files for JMTK 1.0.010P1 is located in Appendix B.

3.3 Changes Installed

A listing of all software changes incorporated into the software since JMTK 1.0.0.10 is located in Appendix A.

3.4 Waivers

1. List of Required COTS Licenses: None Required.
2. Software Product Specification (SPS): a waiver for the SPS has been approved.
3. Database Design Document (DBDD): a waiver for the DBDD has been approved.
4. System Administrators Manual (SAM): None required.
5. User's Manual (UM): None required.
6. Programmers Manual (PM): None required, see JMTK 1.0.0.10 Programmer's Refernece Manual.
7. Application Program Interface Reference Manual (APIRM): None required.
8. Software Test Plan (STP): None required, see STP, dated 23 October 1996
9. Software Test Description (STD): None required, see STD dated 23 October 1996

3.5 Adaptation Data

None.

3.6 Installation Instructions

Installation instructions are located in:

C   Installation Procedures (IP) for Joint Mapping Tool Kit (JMTK) Component Version 1.0.1.10P1

The following configuration is recommended:

C   RAM: 128 MB minimum; 192 optimum
C   Disk space: 2 GB
C   Swap Space: 300 MB

3.7 Possible Problems and Known Errors

A listing of all problems and known errors for JMTK-V 3.0.2.5P1 is located in Appendix C.

4. Notes

4.1 Acronyms

C4I	Command, Control, Communications, Computers, and Intelligence
COE	Common Operating Environment
DAT	Digital Audio Tape
DII	Defense Information Infrastructure
DFARS	Defense Federal Acquisition Regulation Supplement
GB	Gigabyte
HP–UX	Hewlett–Packard UNIX–based Operating System
INRI	Inter–National Research Institute, Inc.
IP	Installation Procedures
JMTK–V	Joint Mapping Tool Kit Visualization
MB	Megabyte
NIMA	National Imagery and Mapping Agency
RAM	Random Access Memory
SUM	Software User's Manual
SVD	Software Version Description
TAC–3/TAC–4	Tactical Advanced Computer, Version 3/4
UB	Unified Build

Appendix A: Changes Installed

The following software trouble reports (STRs) and software change proposals (SCPs) have been implemented in JMTK 1.0.0.10P1.

Priority 1

GSPR Number: None

AGENCY Number: JK00072

INRI Number: 30200001004

Short Description:
CARTOGRAPHER APPEARS TO HAVE A SLOW MEMORY LEAK.

LONG DESCRIPTION:
CARTOGRAPHER APPEARS TO HAVE A SLOW MEMORY LEAK. THIS PROBLEM WILL DISPLAY ITSELF WHEN PROCESSING LINK DATA (PASSIVE, 2-WAY LINK-11, OLD LINK-11, OR ACDS LINK) OVER A LONG PERIOD OF TIME. UNDER THE TEST CASE (ACDS LINK) AFTER RUNNING IN DATA FOR APPROX. 50 HOURS, THE MEMORY FOR CARTOGRAPHER WENT FROM 2.5 MB TO 39 MB. RECOMMEND "PURIFY" BE RUN AGAINST CARTOGRAPHER TO DETERMINE THE CAUSE OF THE LEAK.

ACTION:
LEAK CORRECTED.

PRI: 1

JMTK

PRIORITY 2

GSPR NUMBER: NONE

AGENCY NUMBER: DU00370

INRI NUMBER: 30200000349

SHORT DESCRIPTION:
SOME SYMBOL DESCRIPTIONS MISSING.

LONG DESCRIPTION:
NCTSI TEST SET 07A. SOME SYMBOL DESCRIPTIONS ARE MISSING. SYMBOL DESCRIPTIONS ARE TO BE IAW OS-OTG SPEC REV B, TABLE 5-8.

ACTION:
MISSING SYMBOL DESCRIPTIONS ADDED.

PRI: 2

JMTK

GSPR NUMBER: NONE

AGENCY NUMBER: NONE

INRI NUMBER: 30200001047

SHORT DESCRIPTION:
INTEGRATION FIXES -- MAINLY TO SUPPORT A "PATCH" TAPE.

LONG DESCRIPTION:
INTEGRATION FIXES -- UPDATES TO IMAKE/MAKEFILES AND PACKAGES TO PROPERLY PREPARE FOR A "PATCH" DELIVERY. ALSO UPDATES REQUIRED TO SUPPORT TWO NEW SEGMENTS: MAREXT AND COMEXT.

ACTION:
DELIVERED UB AND JMTK AS PATCHES.

PRI: 2

JMTK

PRIORITY 3

GSPR NUMBER: D70403

AGENCY NUMBER: DU00843

INRI NUMBER: 30200001015

SHORT DESCRIPTION:
INCORRECT LINK TO OVERLAY HOT POINTS.

LONG DESCRIPTION:
AN ACTIVE OVERLAY WILL DISPLAY "HOT POINTS" WHICH ALLOW THE OPERATOR TO CLICK ON THE GEODISPLAY TO VIEW THE EDIT WINDOW FOR THE SELECTED OVERLAY OBJECT. IN 3.0.2.5, THE "HOT POINTS" FOR EACH OVERLAY OBJECT ARE DISPLAYED; HOWEVER, ONLY THE EDIT WINDOW FOR THE FIRST OVERLAY OBJECT LISTED IN THE MAIN OVERLAY EDIT WINDOW (FOR THAT ACTIVE OVERLAY) WILL DISPLAY REGARDLESS OF THE OVERLAY OBJECT "HOT POINT" SELECTED. SOFTWARE LOADED: OS 10.20, DII KERNEL 3.0.10, UB CORE 3.0.2.5, JMTK 3.0.2.5, LINK-11/TADIL-A INTERFACE & ADMIN 2.3.0.0, C4I ACCT GRPS 1.0.0.3.

ACTION:
LINKING PROBLEM CORRECTED.

PRI: 3

JMTK

GSPR NUMBER: D70405

AGENCY NUMBER: DU00846

INRI NUMBER: 30200001018

SHORT DESCRIPTION:
INCORRECT LINK TO OVERLAY HOT POINT (SOLARIS).

LONG DESCRIPTION:
AN ACTIVE OVERLAY WILL DISPLAY "HOT POINTS" WHICH ALLOW THE OPERATOR TO CLICK ON THE GEODISPLAY TO VIEW THE EDIT WINDOW FOR THE SELECTED OVERLAY OBJECT. IN 3.0.2.5, THE "HOT POINTS" FOR EACH OVERLAY OBJECT ARE DISPLAYED; HOWEVER, ONLY THE EDIT WINDOW FOR THE FIRST OVERLAY OBJECT LISTED IN THE MAIN OVERLAY EDIT WINDOW (FOR THAT ACTIVE OVERLAY) WILL DISPLAY REGARDLESS OF THE OVERLAY OBJECT "HOT POINT" SELECTED. SOFTWARE LOADED: OS 2.5.1, DII KERNEL 3.0.0.3 W/PATCH 2, UB CORE 3.0.2.5, JMTK 3.0.2.5, LINK-11/TADIL-A INTERFACE & ADMIN 2.3.0.0, C4I ACCT GRPS 1.0.0.3.

ACTION:
LINKING PROBLEM CORRECTED.

PRI: 3

JMTK

GSPR NUMBER: D70480

AGENCY NUMBER: NONE

INRI NUMBER: 30200000879

SHORT DESCRIPTION:
TEXT OVERLAY AND SYMBOL OVERLAY KEYBOARD ENTRIES REQUIRE LEFT MOUSE BUTTON TO BE HELD
DOWN.

LONG DESCRIPTION:
TEXT OVERLAY AND SYMBOL OVERLAY KEYBOARD ENTRIES REQUIRE LEFT MOUSE BUTTON TO BE HELD
DOWN. IF THE LEFT MOUSE BUTTON ISN'T HELD DOWN CONTINUOUSLY WHILE TYPING ON THE KEYBOARD, NO
ENTRIES WILL BE MADE IN THE DESIRED FIELD(S). THIS OCCURS FOR ALL FIELDS THAT ACCEPT ALPHA OR
NUMERIC KEYBOARD ENTRIES. OCCURS ONLY ON HP.

ACTION:
KEYBOARD ENTRIES NO LONGER REQUIRE HOLD DOWN OF LEFT MOUSE BUTTON.

PRI: 3

JMTK

GSPR NUMBER: NONE

AGENCY NUMBER: DU00057

INRI NUMBER: 30200000333

SHORT DESCRIPTION:
J210 RECALL BRIEF OPTION DISPLAYS BLANK SCREEN.

LONG DESCRIPTION:
J210 RECALL BRIEF OPTION DISPLAYS BLANK SCREEN.

ACTION:
PROBLEM CORRECTED.

PRI: 3

JMTK

GSPR NUMBER: NONE

AGENCY NUMBER: NONE

INRI NUMBER: 30200000431

SHORT DESCRIPTION:
UNABLE TO CREATE FULL SCREEN OR SINGLE WINDOW SLIDES ON SOLARIS.

LONG DESCRIPTION:
UNABLE TO CREATE FULL SCREEN OR SINGLE WINDOW SLIDES ON SOLARIS. WHEN USING SAVE SLIDES FUNCTION, THE OPERATOR CAN SAVE PRINTER REGION AND SELECTED REGION SLIDES. IF THE OPERATOR GOES THROUGH THE PROCEDURE TO CREATE FULL SCREEN OR SINGLE WINDOW SLIDES, ALL LOOKS NORMAL UNTIL THE RECALL SLIDES WINDOW IS OPENED—THE FULL SCREEN AND SINGLE WINDOW SLIDES ARE NOT THERE. THE PROGRAM FOR MAKING SLIDES, SCREENS, IS LOOKING FOR THE EXECUTABLE XWD IN USR/BIN/X11. THIS IS WHERE IT IS ON HP. ON SOLARIS, THE XWD EXECUTABLE IS LOCATED IN USR/OPENWIN/BIN AND USR/BIN/X11 IS NON-EXISTENT. TWO POSSIBLE SOLUTIONS: (1) MODIFY THE PROGRAM TELLING THE SYSTEM TO LOOK FOR XWD IN USR/OPENWIN/BIN IN CASE OF SOLARIS, OR (2) PUT A SCRIPT IN POSTINSTALL CREATING A SYMBOLIC LINK TO XWD WHEN THE PROGRAM LOOKS FOR USR/BIN/X11 DIRECTORY. WORKS CORRECTLY ON HP.

ACTION:
PROBLEM CORRECTED. THE EXECUTABLE NOW UTILIZES THE CORRECT PATH TO ACCESS XWD.

PRI: 3

JMTK

GSPR NUMBER: NONE

AGENCY NUMBER: NONE

INRI NUMBER: 30200000988

SHORT DESCRIPTION:
CHART INSETS APPEAR WITH DIFFERENT BACKGROUND COLORS WHEN PART OF BRIEFING SLIDES.

LONG DESCRIPTION:
CHART INSETS APPEAR WITH DIFFERENT BACKGROUND COLORS WHEN PART OF BRIEFING SLIDES. WHEN THE CHART INSETS WERE SAVED AS SLIDES, THE OCEAN WAS BLACK AND THE LAND MASS BROWN. WHEN THE CHART INSETS WERE BROUGHT UP IN THE BRIEFING SLIDE SEQUENCE, THE OCEAN AND LAND MASSES WERE WHITE, DROWNING OUT THE TRACKS. WHEN THE BRIEF WAS CLOSED AND THEN STARTED AGAIN, THE CHART INSETS' OCEAN AND LAND MASS WERE DIFFERENT SHADES OF GREEN. THE SHADES OF GREEN REMAINED FOR EACH VIEWING OF THE BRIEFING SLIDES. THE GREEN ALSO DROWNED OUT THE TRACKS ON THE DISPLAY. THE CHART INSET WAS OF JUST ONE OCEAN REGION.

ACTION:
PROBLEM CORRECTED. COLOR MAPPING PROBLEMS WERE CORRECTED IN SCREENS.

PRI: 3

JMTK

APPENDIX B: INVENTORY OF SOFTWARE CONTENTS

THE FOLLOWING LIST IDENTIFIES COMPUTER LIBRARIES AND FILES FOR JMTK 1.0.0.10P1.

JMTK.P1/INTEG:
VSOUTPUT

JMTK.P1/SCRIPTS:
.CSHRC.JMTK*   .CSHRC.SESSION*

JMTK.P1/SEGDESCRIP:
DEINSTALL*   POSTINSTALL*   RELEASENOTES
SEGINFO   SEGNAME   VERSION
VALIDATED

JMTK.P1/BIN:
CARTOGRAPHER*   CENTERWIDTH*   CHARTINSET*
DMADRAW*   DMALOAD*   DMASPATIAL*
DESTROYCHART*   DRAWDTED*   DRAWRASTER*
DRAWVECTOR*   JMTKCHART*   KILLCHART*
KILLJMTK*   LOADDTED*   LOADRASTER*
MAPCOLORCTL*   MAPCONTROL*   MAPINTENSITY*
MAPLOAD*   OVERLAYS*   PIMTRACKS*
RPFDRAW*   RPFLOAD*   RUN_JMTK_CHARTINSET1*
RUN_JMTK_DEMO*   RUN_JMTK_MENU*   RUNJMTK*
TACPLOT*   TESTPOLYLINE*   VEDEDIT*
VEDMGR*   VEDMOUNT*   MKMAPDIR*

JMTK.P1/DATA:
VDD/

JMTK.P1/DATA/VDD:
VDD.HTML   VDD_TOC.HTML

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APPENDIX C: POSSIBLE PROBLEMS AND KNOWN ERRORS

THE FOLLOWING LIST IDENTIFIES KNOWN PROBLEMS FOR JMTK 1.0.0.10P1.

GSPR	AGENCY	INRI	PRI	SHORT DESCRIPTION
D70404	DU00844	30200001016	3	UNABLE TO ENTER TEXT IN OVERLAY TEXT OBJECT
D70407	DU00845	30200001017	3	UNABLE TO ENTER TEXT ROTATION IN OVERLAY TEXT OBJECT
D70461	DU00851	30200000989	3	DEAD RECKONING IN THE ATTRIBUTE toggles option does not work. (SOLARIS ONLY)
D70479	JK00052	30200000981	3	UNEXPECTED REFRESH TO CHART USING MRELOADSEARCHPATH
	JK00080	30200000760	2	VECTOR DISPLAY window dies if profile with no data is selected

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